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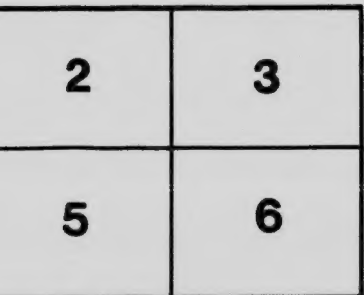
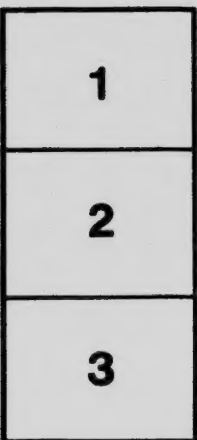
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VARIETIES OF WHEAT, OATS AND BARLEY

BY

W. C. McKILLICAN, B.S.A.

WHEAT.

The discussion of varieties of wheat for Manitoba resolves itself almost entirely into a comparison of Red Fife and Marquis. There are no other serious contenders for public favours, and this is fortunate for a multiplication of varieties is an evil.

Red Fife has been the standard variety of wheat in Western Canada for many years. The excellent reputation for hard wheat which this country holds in the world's markets has been built upon the merits of this variety. It produces a flour of the finest quality, it yields well, is hardy and has many other merits. However, it is a little late for safety in many parts of the West, not so much in Manitoba as in the other provinces. This led to a quest for another variety which would have the good qualities of Red Fife and ripen a little earlier. Many substitutes were tried, but until the advent of Marquis, none were entirely satisfactory. Marquis is now rapidly taking the place of Red Fife, but there are probably some of the drier districts with light soil where the old variety is still to be preferred.

Marquis is now the principal variety of wheat throughout Western Canada. Originated by the Dominion Cerealists of the Experimental Farms only a few years ago, it has made a most phenomenal capture of the approval of the farmers and the grain men of Western Canada. It produces a grade of flour fully as good as that from Red Fife. It ripens from five to ten days earlier, depending on the district and season. It produces much less straw per acre and the straw is stiffer and less subject to lodging. Being earlier, it escapes rust better in rust-infested districts. Where the soil is light or very dry, it is sometimes too short in the straw, but in strong heavy land it is unexcelled. In most localities it is found to yield more heavily than Red Fife. On the Brandon Experimental Farm, during the last five years it has produced almost ten bushels per acre more (on summer fallow). In 1915 it has been observed to be injured more easily by June frosts than Red Fife. Whether this was due to a difference in stage of development, or to a difference in hardiness, is not known. Since it has not been injured by spring frost in any ordinary season the matter is not important.

Marquis has proved itself and may now be safely recommended as the best variety for most districts in Manitoba.

DOMINION EXPERIMENTAL FARMS.

J. H. GRISDALE, B.Agr.,

Director.

W. C. McKILLICAN, B.S.A.,

Superintendent, Brandon Experimental Farm.

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Prelude is a variety of wheat introduced for a special purpose. It is the earliest variety of wheat known in Western Canada, ripening at Brandon about eleven days before Marquis. It is intended to make wheat growing possible in districts that are too frosty to grow Marquis successfully. It is not recommended for any district that can grow Marquis or Red Fife, as it yields only about two-thirds as much as Marquis, it is bearded and it shells easily.

Bluestem is the variety most commonly grown in parts of Minnesota and Dakota, and there are districts in Manitoba where it has some popularity. It produces more straw than Red Fife and, consequently, has the appearance of being more productive. It is in favour especially in light or worn-out land. It is doubtful, however, whether it really yields better even under these conditions, the better appearance being due chiefly to a more vigorous growth of straw. It is later than either Red Fife or Marquis, and as the wheat is scarcely equal to these varieties for milling purposes, it is not recommended. Where it appears to be the best kind, soil treatment that would ensure a better crop would be preferable to choosing a variety that is supposed to be suitable for poor land.

Egyptian King or Alaska wheat is mentioned only to be condemned. It is a peculiar looking variety with heads divided into small branches. Most fantastic claims have been made in regard to its yielding power and it has been sold at most extravagant prices by unscrupulous promoters. The flour from this wheat is not at all suited to ordinary bread-making. A spread of the growing of this variety would be disastrous to the Canadian wheat business. It is to be strongly condemned.

OATS.

Among the varieties most commonly grown in Manitoba, and most frequently discussed, are the following: Banner, Abundance, Newmarket, Victory, Gold Rain, Ligowo and Garton's No. 22. For early varieties, Daubeney and Orloff are often recommended.

Banner has been the standard variety of oats in Manitoba for many years. It is unsurpassed in yielding power and does well on all kinds of land. Its average yield per acre for the last five years on the Brandon Experimental Farm is 102 bushels, 17 pounds. Being comparatively thin-hulled, it is more valuable for feed than heavy-hulled varieties. It is highly recommended.

Gold Rain is a yellow oat which has equalled Banner in yield in our comparative tests; it has ripened slightly earlier. It also has good quality of grain and good strength of straw. Its yellow colour detracts slightly from its appearance, but it is a very desirable variety.

Ligowo is an excellent variety of white oats, very nearly equal to Banner, but standing just below it in yield.

Newmarket is a popular old variety of oats which has yielded very nearly as well as the best. It produces a plumper grain than Banner, but is not quite so thin in the hull.

Victory is a newer variety of white oat that has met with much favour in some districts. Possibly under some conditions it may excel, but in our tests thus far it has stood a little lower in yield than the best, though the difference is really not decisive. It has good quality of grain and straw.

Abundance or Regenerated Abundance has won more prizes at seed fairs and grain shows than any other variety. This gave it a great popularity for a few years.

The grain is very handsome in appearance, being plump, large and very heavy. However, it has not shown up particularly well in actual field tests. It yields considerably less than the Banner, and in some cases lodges more easily.

Garton's No. 22 is a mixture of types rather than a distinct variety. The straw is very heavy, but is more brittle than that of the finer-strawed varieties and does not stand up any better. This is one of the least desirable varieties under test.

Orloff is a mixed yellow and white variety, essentially the same as the so-called **Sixty Day** oat. It is very early, eleven days earlier than Banner in these tests. The average yield during the last five years (100 bushels) is probably misleading, as conditions on the experimental plots in one or two seasons were unusually favourable to the early varieties.

Under normal conditions the yield is much less than that of the best late varieties. The grain is thin and light, but is correspondingly thin in hull. It is recommended only where the best varieties are found to be too late, in such districts it may be found to be of great value.

Daubeney is a very early white oat, very similar in characteristics to Orloff. It has a more desirable colour and is more likely to be found in a pure condition. It fills the same place as described above for Orloff, and is recommended for districts where Banner is found to be too late or too rank growing.

BARLEY.

Six-rowed varieties of barley are more desirable for our climate than the two-rowed, as they yield more heavily, are earlier and stand up better.

Manchurian and Mensury.—Mensury is the old standard variety of the West. Manchurian is a selected strain of the same stock. Best results have been obtained from these in our tests at Brandon. They yield well, are as early as can be obtained without sacrificing yield, and are reasonably stiff in straw. There is little difference between the two, but Manchurian being a pedigree strain, is more uniform in type.

O. A. C. No. 21 is very similar in type to Manchurian, the only noticeable difference being a bluish tinge in the colour of the grain of the O. A. C. No. 21. It is very similar in the good qualities described and is preferred in some places, but has not equalled Manchurian in our tests.

Garton's No. 68 is a variety resembling very closely the two above-named and giving excellent results in our tests.

Gold is one of the best two-rowed varieties. It has short and rather weak straw, but yields nearly as well as the six-rowed varieties.

Hannchen is very similar to Gold, but less desirable.

Guy Mayle or Guymalaye is probably the best hulless barley. However, it does not yield as well as ordinary barley and the heads are inclined to break off before it is ripe.

Beardless Barley is very early and for that reason is sometimes grown where it is desired to cut the crop before the wild oats ripen. The beardless character makes it more suitable for green feed than ordinary barley. It is light yielding and the grain is not plump. It is therefore not desirable except in the special cases mentioned.



